

Nico D'Cotta

Backend Software Engineer

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EXPERIENCE

06/2020 – today
part-time,
then Staff Engineer,
then Senior Engineer

Senior Software Engineer, at Blockchain.com

Large crypto finance house (including a wallet and an exchange) with retail and institutional businesses. Owner of several **JVM** (mainly **Kotlin**) real-time financial services critical for business operation and central to user experience, reporting, and auditing; like ledger-keeping/accounting and indicative pricing. Designing and scaling up **stateful distributed** systems with an event-driven architecture. Reviewing systems' architecture designs and software development methods to cultivate **sustainable engineering practices** and achieve **operational excellence** within the wider company. Implementing application **performance monitoring** and performing **production incident response**.

06/2019 –
10/2019
intern

Software Engineer, at Emit, Inc.

Four-person startup with its own smartwatch aiming to provide time-analytics to institutional customers. Worked on data analytics, developing real-time data processing pipelines and libraries in **Kotlin** and **Python** on top of serverless tech on **AWS (Lambda, DynamoDB, ElasticSearch)**.

EDUCATION

2018 – 2022

MEng Computer Science – First Class Honours, at Imperial College London

Focus on Software Engineering, Distributed Systems, Network and Computer Security, Systems and Data Scalability, Logic-based AI, Type Systems for Programming Languages, Simulation & Modelling. Additional Business School modules include Project Management, Finance & Financial Markets, and Business Strategy.

2015-2018

French Baccalaureate (S-SI) – Highest Honours, at French Lycée of Madrid

High-school diploma with **Engineering Sciences with Further Maths** specialisations, and completed optional Portuguese and Music modules. Extracurriculars include two Model UNs, Drama, Choir, student representative, competing in the basketball team.

PROJECTS

see my full portfolio at nico.dcotta.eu

AWS (Lambda,
DynamoDB, EC2),
Kotlin, VueJS

DJStreamr, collaborative streaming service for DJs

djstreamr.com

Music synchronisation protocol implemented as a webapp with an event-driven platform architecture which leverages serverless technology.

Elixir, Paxos

Multi-Paxos

cottand/multi-paxos

Implementation of a variation of the Paxos consensus algorithm, as specified in the paper *Paxos Made Moderately Complex*.

Kotlin, JVM
bytecode, ARM11
assembly

WACC, multiplatform compiler

cottand/WACC

Multiplatform compiler from WACC (a toy language) to JVM bytecode and ARM11 64-byte assembly that supports basic constructs like stack-allocated primitives, and heap-allocated arrays and pairs.

C, x86 assembly

PintOS, UNIX-like OS

pintos-os.org

Pint-sized OS with features such as advanced scheduling, paging, virtual memory and user programs with support for some of the C stdlib.

TECHNOLOGIES

Proficient in JVM (Kotlin, Java), Gradle

Experience with Python, C, Haskell, Typescript, Elixir

Nomad, AWS (Lambda, DynamoDB EC2, S3, CodeDeploy, API Gateway)

gRPC + protobufs, Kafka, Akka, PostgreSQL, Docker, APM, ConcourseCI, TravisCI, GitlabCI, React, VueJS

Object-oriented, Functional, Actor-oriented, and Procedural programming.

HOBBIES

I enjoy DJing as well as kitesurfing and rock climbing!

LANGUAGES

English - bilingual (C2 certification)

Spanish - native

French - bilingual

Portuguese - advanced level

SKILLS + FEEDBACK

"Cool under pressure"

"Pleasant to work with"

"Owns solutions and sees them through"

"Aware of product quality"

"Knows which battles to pick"

I can google well!